

### Abstract

It is possible to realize a high-speed parallel processing by unifying processing and communication and join table-formatted data at a high speed. An information processing system includes a plurality of PMM (12) and data transmission paths (14, 16) for connection between the PMM and transmitting a value of a PMM to another PMM. A memory of each PMM holds a list of values of first items arranged in the ascending order or descending order without overlap and/or a list of values of the second item to be shared. A memory module of each PMM transmits a value contained in the value list to another PMM, receives a value contained in the value list from the another PMM, references the value list of the first item and the value list of the second item of the another PMM, and generates a list of common values considering the values contained in the value lists of the first item and the second item of all the other PMM.